

## ACKNOWLEDGMENTS

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OBSERVATION OF EASTERN RED BATS (*LASIURUS BOREALIS*) MATING IN COASTAL VIRGINIA--At approximately 1515 h on 24 November 2006, Jethro Runco, Shannon Ehlers, and I observed an Eastern Red Bat (*Lasiurus borealis*) foraging over a brushy clearing along a road at Eastern Shore of Virginia National Wildlife Refuge (ESVNR), which lies at the southeastern tip of the Delmarva Peninsula in Northampton County, Virginia (37° 06' N, 75° 57' W). The peninsula is a patchwork of agricultural areas, brushy fields, and loblolly pine woodlots. The first bat was joined by a conspecific at approximately 1530 h. The two bats began flying very closely together and we saw what we assumed was one bat suddenly drop and land heavily in the mown grass border along the road. We located the spot and found both bats on the ground in an obvious copulatory position. The male had mounted the female, ostensibly in flight, and was on her back, with both bats facing forward. The male gripped the dorsolateral fur of the female with the thumbs of his closed wings and was biting the fur on the female's back, as if to maintain his position; the female would occasionally turn her head back and chatter, but did not appear to make any attempt to disengage or escape. The bats were virtually oblivious to us as we held cameras a few cm from them and took several photos (Fig. 1) and short videos; at one point I even matted down a few blades of grass beside the bats with my foot without any apparent disturbance to them. The bats remained engaged for approximately 30 min; then, after a few sudden flaps of their wings, they disengaged, rested briefly on the ground, and flew away.

Published observations of mating Eastern Red Bats are rare (Stuewer, 1948; Jackson, 1961), and most breeding activity is believed to occur in August and September (Shump & Shump, 1982; Linzey, 1998). The date noted here is the latest reported; previous



Fig. 1. Male (left) and female Eastern Red Bats mating at Eastern Shore of Virginia National Wildlife Refuge, 24 November 2006 (photo: Scott McConnell).

“October” matings were noted by Allen (1869) and Saguey et al. (1998).

Bounded by the Atlantic Ocean and the Chesapeake Bay, the ESVNWR area is well-known as a bottleneck for migrating birds in autumn (Mabey & Watts, 2000). Eastern Red Bats are highly migratory (Shump & Shump, 1982) and likely concentrate in distribution along the Atlantic Coast during autumn migration (Cryan, 2003). It is possible that mating opportunities for Eastern Red Bats increase here as they gather in large numbers while waiting for optimal conditions to cross the Chesapeake Bay. Timm (1989) postulated that tree bats migrating through Chicago, Illinois, were concentrated along the shoreline of Lake Michigan due to their reluctance to cross the lake. As there are no overland routes to the south of ESVNWR, it is likely that Eastern Red Bats occurring in the area during autumn eventually cross open water on their southward migration. Carter (1950) reported *L. borealis* in a flock of about 200 bats seeking refuge on a ship approximately 100 km offshore of New York, and Thomas (1921) reported them in a flock that landed on a ship about 30 km off the coast of North Carolina. Allen (1923) suspected that this species was involved in a series of events in which bat flocks visited a ship off of the Atlantic Coast for three consecutive nights, including one night while the ship was in the Chesapeake Bay. All three of the events cited here of *L. borealis* over open waters off the East Coast occurred during autumn.

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